REMARKS

Claims 1, 4, 6-11, 14 and 16-26 are pending in this application, with claims 2, 3, 5, 12, 13 and 15 having previously been canceled without prejudice or disclaimer. By the present Amendment, claims 1, 11 and 26 have been amended to clarify the claimed subject matter. Claims 1, 4, 6-11, 14 and 16-26 remain pending upon entry of this Amendment, with claims 1, 11 and 26 being in independent form.

Claims 1, 4, 6, 9-11, 14-16, 19, 20, 24 and 25 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol et al. (US 2004/0101086 A1) in view of Kim et al. (US 6,278,761) and further in view of Wiemker (WO 02/103065) and Kvist et al. (1988, "Total and visceral adipose-tissue volumes derived from measurements with computed tomography in adult men and women: predictive equations"). Claims 7, 8, 17 and 18 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker and Kvist and further in view of Wollenweber (US 7,155,047). Claims 21 and 22 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker and Kvist and further in view of Rosania et al. (US 2003/0059093 A1). Claims 23 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Sabol in view of Kim, Wiemker, Kvist and Wollenweber and further in view of Griffin et al. (US 2004/0207625 A1). Claims 26 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Wiemker in view of Kvist and Kim.

Applicant respectfully submits that independent claims 1, 11 and 26 of the present application are allowable, for at least the reason that the cited art does not disclose or suggest the aspects of removes ***data of an epidermal tissue layer region from data of the body region***, extracting automatically a non-adipose region from the body region wherein *the data of an epidermal tissue layer region has been removed from the data of the body region*, and separating

the total body adipose region into a visceral adipose region and a subcutaneous adipose region based on ***automatically extracted positional information of the non-adipose region*** extracted from the body region wherein the data of an epidermal tissue layer region has been removed from the data of the body region.

Wiemker, as understood by applicant, proposes an approach for detecting intensity transitions in medical image data (such as for rendering and measurement of lung nodules), by applying a Laplace operator to the intensity values of each pixel or voxel of the image data set to obtain global or local maxima of a gradient integral function which are correlated to contrasting boundaries. In a case of applying such approach to an abdomen CT data set, the gradient integral function F(T) shows maxima at the transitions from background to soft tissue and from soft tissue to bone, as shown graphically in Fig. 1 (reproduced below) of Wiemker.

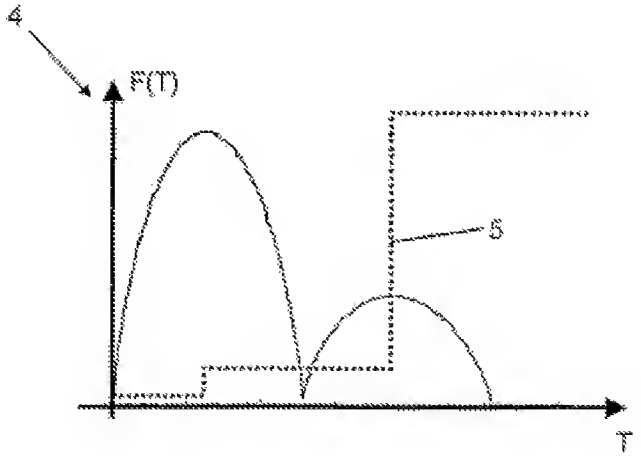

Fig. 1

Further, in the approach of Wiemker, an opacity transfer function can be applied used to render selected portions of the data set, without removing any data. For example, in Fig. 2, image 6 in which the complete body appears opaque while the surrounding air is made fully

transparent is obtained by applying opacity transfer function 9 having a step at -460 HU. On the other hand, opacity transfer function 10 having a step at -40 HU is applied to obtain image 7 for visualizing skin to muscle transition, and opacity transfer function 11 having a step at +200 HU is used to obtain image 8 in which anatomical structures of the bones has been separated from soft tissues.

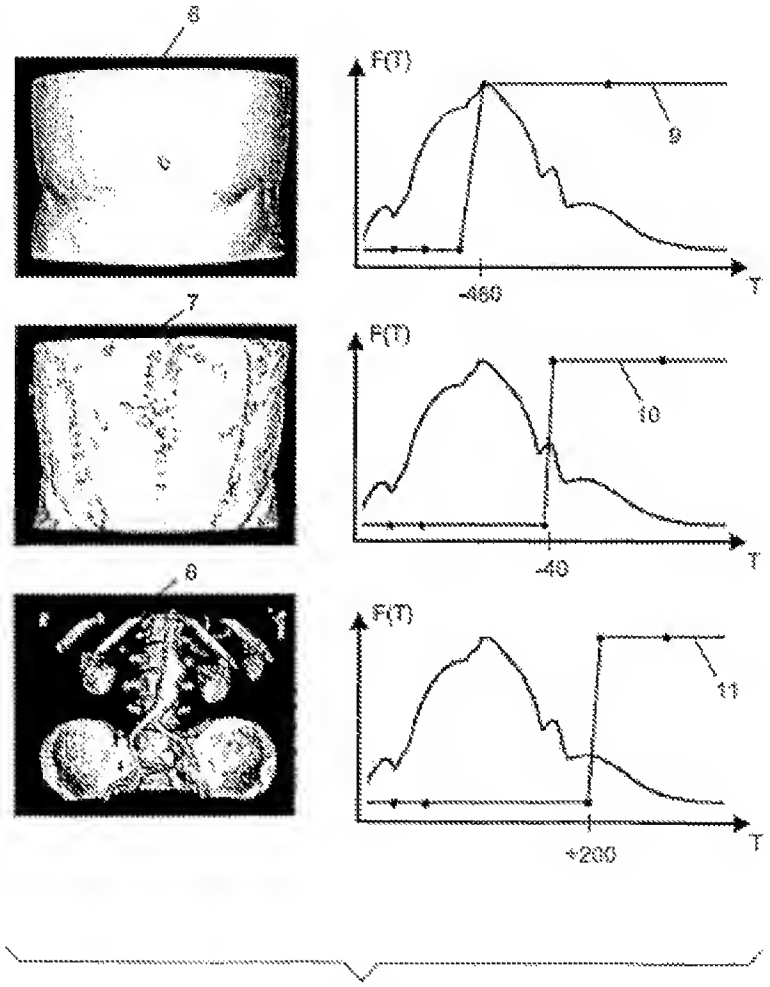

Fig. 2

However, the approach of Wiemker does NOT disclose or suggest removing ***data of an epidermal tissue layer region from data of the body region***, extracting automatically a non-

adipose region from the body region wherein *the data of an epidermal tissue layer region has been removed from the data of the body region.*

As noted above, Wiemker applies an opacity transfer function to render selected portions of the data set, without removing any data.

The other cited references (including Sabol, Kim, Kvist, Grauer, Wollenweber, Rosania and Griffin) have been discussed amply already in the record, and like Wiemker, simply do NOT disclose or suggest the aforementioned aspects of removing data of an epidermal tissue layer region from data of the body region, extracting automatically a non-adipose region from the body region wherein the data of an epidermal tissue layer region has been removed from the data of the body region.

Further, as acknowledged in the Office Action, Wiemker does NOT disclose or suggest separating the total body adipose region into a visceral adipose region and a subcutaneous adipose region based on automatically extracted positional information of the non-adipose region extracted from the body region wherein the data of an epidermal tissue layer region has been removed from the data of the body region.

Kim, as understood by applicant and as already discussed at length in the record, proposes distinguishing the abdominal cavity and the subcutaneous fat portion by using a contrast of computed tomography values, BUT, as acknowledged in the record, does NOT disclose or suggest separating the total body adipose region into a visceral adipose region and a subcutaneous adipose region ***based on automatically extracted positional information*** of the non-adipose region extracted from the body region wherein the data of an epidermal tissue layer region has been removed from the data of the body region.

Kvist, as understood by applicant and as already discussed at length in the record,

proposes that a region of interest can be delineated manually by user operation of a pointing device such as a mouse or light pen.

Kvist, like the other cited references, does NOT disclose or suggest separating the total body adipose region into a visceral adipose region and a subcutaneous adipose region ***based on automatically extracted positional information*** of the non-adipose region extracted from the body region wherein the data of an epidermal tissue layer region has been removed from the data of the body region.

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does ***NOT*** render unpatentable said aforementioned aspects of the present application, and that therefore independent claims 1 and 11, and the claims depending therefrom, are allowable.

Further, applicant respectfully points out once again that none of the cited art discloses or suggests the aspects of independent claims 1 and 11 of the present application of ***automatically*** ... setting a line surrounding the abdominal wall muscle layer region based on positional information of the abdominal wall muscle layer region.

As pointed out above, Kvist proposes that an operator manually specifies a region of interest by operation of a pointing device such as a mouse or light pen.

Applicant earnestly solicits the allowance of the application. If the Examiner can suggest an amendment that would advance this application to condition for allowance, the Examiner is respectfully requested to call the undersigned attorney.

If a petition for an extension of time is required to make this response timely, this paper should be considered to be such a petition. The Patent Office is hereby authorized to charge any required fees in connection with this amendment, and to credit any overpayment, to our Deposit

Account No. 03-3125.

Respectfully submitted,

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